March 31, 2011

Vibrio vulnificus Fact Sheet

1. **What is** *Vibrio vulnificus***?** – *V. vulnificus* is a bacterium in the same family as those that cause cholera. It normally lives in warm seawater and is part of a group of vibrios that are called "halophilic" because they require salt.

2. **What type of illness does** *V. vulnificus* **cause?** – *V. vulnificus* can cause disease in those who eat contaminated seafood or have an open wound that is exposed to warm seawater:

   a. Among healthy people, ingestion of *V. vulnificus* can cause vomiting, diarrhea, and abdominal pain. In persons with underlying health problems, particularly those with chronic liver disease, *it* can infect the bloodstream, causing a severe and life-threatening illness characterized by fever and chills, decreased blood pressure (septic shock), and blistering skin lesions. *V. vulnificus* bloodstream infections are fatal about 50% of the time.

   b. *V. vulnificus* can also cause an infection of the skin when open wounds are exposed to warm seawater; these infections may lead to skin breakdown and ulceration. Persons who are immunocompromised are at higher risk for further invasion of the organism into the bloodstream and potentially fatal complications.

3. **How common is** *V.vulnificus* **infection? -** *V. vulnificus* is a rare cause of disease, but it is also underreported. Between 1988 and 1995, CDC received reports of over 300 *V. vulnificus* infections from the Gulf Coast states, where the majority of cases occur. There is no national surveillance system for *V. vulnificus infection*, but CDC collaborates with the states of Alabama, Florida, Louisiana, Texas, and Mississippi to monitor the number of cases of *V. vulnificu*s infection in the Gulf Coast region.

4. **How do persons get infected with** *V. vulnificus***? -** Persons who are immunocompromised, especially those with chronic liver disease, are at risk for *V. vulnificus* when they eat raw seafood, particularly oysters. A recent study showed that people with these pre-existing medical conditions were 80 times more likely to develop *V. vulnificus* bloodstream infections than were healthy people. The bacterium is frequently isolated from oysters and other shellfish in warm coastal waters during the summer months. Since it is naturally found in warm marine waters, people with open wounds can be exposed to V. *vulnificus* through direct contact with seawater. There is no evidence for person-to-person transmission of *V. vulnificus*.

5. **How can** *V. vulnificus* **infection be diagnosed**? - *V. vulnificus* infection is diagnosed by routine stool, wound, or blood cultures; the laboratory should be notified when this infection is suspected by the physician, since a special growth medium can be used to increase the diagnostic yield. Doctors should have a high suspicion for this organism when patients present with gastrointestinal illness, fever, or shock following the ingestion of raw seafood, especially oysters, or with a wound infection after exposure to seawater.

6. **How is** *V. vulnificus* **infection treated?** - If *V. vulnificus* is suspected, treatment should be initiated immediately because antibiotics improve survival. Aggressive attention should be given to the wound site; amputation of the infected limb is sometimes necessary. Clinical trials for the optimal management of *V. vulnificus* infection have not been conducted.

7. **Are there long-term consequences of** *V. vulnificus* **infection?** - *V. vulnificus* infection is an acute illness, and those who recover should not expect any long-term consequences.

8. **What can be done to improve the safety of oysters***?* - Although oysters can be harvested legally only from waters free from fecal contamination, even legally harvested oysters can be contaminated with *V. vulnificus* because the bacterium is naturally present in marine environments. *V. vulnificus* does not alter the appearance, taste, or odor of oysters.

9. **What can be done to prevent** *V. vulnificus* **infection? –** The only way to prevent this infection is to avoid exposure. Persons at high risk for this disease should avoid raw shellfish and avoid exposure of open wounds to warm seawater. There is no vaccine or preventive therapy for *V. vulnificus*.

10. **For more information about** *V. vulnifi*cus**:**
http://www.cdc.gov/nczved/divisions/dfbmd/diseases/vibriov/

This fact sheet provides general information. Please contact your physician for specific clinical information.